

First ISCCP Regional Experiment (FIRE) Cirrus 2 Sky Imaging Video Camera Langley DAAC Data Set Document



Summary:

The First ISCCP Regional Experiments have been designed to improve data products and cloud/radiation parameterizations used in general circulation models (GCMs). Specifically, the goals of FIRE are (1) to improve the basic understanding of the interaction of physical processes in determining life cycles of cirrus and marine stratocumulus systems and the radiative properties of these clouds during their life cycles and (2) to investigate the interrelationships between the ISCCP data, GCM parameterizations, and higher space and time resolution cloud data.

To-date, four intensive field-observation periods were planned and executed: a cirrus IFO (October 13-November 2, 1986); a marine stratocumulus IFO off the southwestern coast of California (June 29-July 20, 1987) a second cirrus IFO in southeastern Kansas (November 13-December 7, 1991); and a second marine stratocumulus IFO in the eastern North Atlantic Ocean (June 1-June 28, 1992). Each mission combined coordinated satellite, airborne, and surface observations with modeling studies to investigate the cloud properties and physical processes of the cloud system.

This document provides information for the FIRE_CI2_SKYCAMERA data set.

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1. Data Set Overview:

Data Set Identification:

FIRE_CI2_SKYCAMERA:

First ISCCP Regional Experiment (FIRE) Cirrus 2 Sky Imaging Video
Camera Data (FIRE_CI2_SKYCAMERA)

Data Set Introduction:



Both all-sky and overhead cloud imaging systems were deployed in support of the FIRE Phase II IFO experiment conducted in Coffeyville, Kansas, from Nov. 12 through Dec. 9, 1991. The systems were positioned at the Coffeyville Municipal Airport Site A. The imaging systems were installed on an elevated platform to allow an unobstructed view of the hemisphere to within 10 deg. of the horizon. The elevated position prevented local site activity and obstructions from interfering with the camera's view and provided a small measure of physical security for the systems. Surface heaters were affixed to the underside of the acrylic mirrors to aid in the removal of condensation such as frost or snow which could be expected during winter conditions. The surface temperatures of each mirror surface were maintained between 10 deg. C. and 20 deg. C. by controlling the heater voltage with a simple variable AC power supply. The mirrors were cleaned by hand once a week as a prudent operational procedure.

Objective/Purpose:

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Summary of Parameters:

Clouds

Discussion:

...

Related Data Sets:

...

2. Investigator(s):

Investigator(s) Name and Title:

Charles H. Whitlock (retired)
NASA Langley Research Center
MS 420
Hampton, VA 23681
USA

Title of Investigation:

First ISCCP Regional Experiment (FIRE)

3. Theory of Measurements:

...

4. Equipment:

Sensor/Instrument Description:

Collection Environment:

...

Source/Platform:

GROUND STATION

Source/Platform Mission Objectives:

...

Key Variables:

Clouds

Principles of Operation:

...



Sensor/Instrument Measurement Geometry:

...

Manufacturer of Sensor/Instrument:

...

Sensor/Instrument:

VIDEO CAMERA

Calibration:

Specifications:

...

Tolerance:

...

Frequency of Calibration:

...

Other Calibration Information:

...

5. Data Acquisition Methods:

...

6. Observations:

Data Notes:

...

Field Notes:

...

7. Data Description:

Spatial Characteristics:

Spatial Coverage:

Data Set Name	Min Lat	Max Lat	Min Lon	Max Lon
FIRE_CI2_SKYC AMERA	37.06	37.06	-95.34	-95.34

Spatial Coverage Map:

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Spatial Resolution:

...

Projection:



...

Grid Description:

...

Temporal Characteristics:

Temporal Coverage:

Data Set Name	Begin Date	End Date
FIRE_CI2_SKYCAMER A	11-12-1991	12-09-1991

Temporal Coverage Map:

...

Temporal Resolution:

...

Data Characteristics:

Parameter/Variable:

...

Variable Description/Definition:

...

Unit of Measurement:

...

Data Source:

...

Data Range:

...

Sample Data Record:

...

8. Data Organization:

Data Granularity:

A general description of data granularity as it applies to the IMS appears in the [EOSDIS Glossary](#).

Data Format:

The data are in native binary format.

9. Data Manipulations:

Formulae:

Derivation Techniques and Algorithms:



...

Data Processing Sequence:

Processing Steps:

...

Processing Changes:

...

Calculations:

Special Corrections/Adjustments:

...

Calculated Variables:

...

Graphs and Plots:

Images are not available for this data set.

10. Errors:

Sources of Error:

...

Quality Assessment:

Data Validation by Source:

...

Confidence Level/Accuracy Judgement:

...

Measurement Error for Parameters:

...

Additional Quality Assessments:

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Data Verification by Data Center:

...

11. Notes:

Limitations of the Data:

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Known Problems with the Data:

...

Usage Guidance:

...



Any Other Relevant Information about the Study:

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12. Application of the Data Set:

...

13. Future Modifications and Plans:

There are no plans to modify these data sets.

14. Software:

Software Description:

...

Software Access:

...

15. Data Access:

Data Center Identification and Contact Information:

Langley DAAC User and Data Services Office
NASA Langley Research Center
Mail Stop 157D
Hampton, Virginia 23681-2199
USA
Telephone: (757) 864-8656
FAX: (757) 864-8807
E-mail: support-asdc@earthdata.nasa.gov
URL: <http://eosweb.larc.nasa.gov>

Procedures for Obtaining Data:

The Langley DAAC Information Management System (IMS) is an on-line system that features a graphical user interface (GUI) that allows to query the Langley DAAC dataset holdings, to view pre-generated browse products, and to order specific data products.

The Langley DAAC User and Data Services staff provides technical and operational support for users ordering data.

Data Center Status/Plans:

The Langley DAAC will continue to archive this data. There are no plans to reprocess.

16. Output Products and Availability:

There are no output products available at this time.

17. References:

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18. Glossary of Terms:

[EOSDIS Glossary.](#)

19. List of Acronyms:

[EOSDIS Acronyms.](#)



20. Document Information:

- **Document Revision Date:** Oct 07, 1996; May 28, 1997; Nov 24, 1997
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